

**Appendix 1a - Taxa Groups**  
**Florida Keys**

ANCOVA of Distance from Shore and Development for Taxa Groups and Substrates: Florida Keys

	Site Percent	Mean Density	Substrate Type		Sediment Depth		Distance From Shore		Development		Interaction	
			Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P
Total Seagrasses	91.08	2.11	<b>-0.1488</b>	<b>0.0002</b>	<b>0.0484</b>	<b>0.0000</b>	-0.3381	0.1151	-0.1652	0.3677	-0.5296	0.1539
Total Calcareous Green Algae	94.44	0.98	<b>0.1107</b>	<b>0.0000</b>	<b>-0.0042</b>	<b>0.0001</b>	0.1653	0.0649	0.0385	0.6150	0.0148	0.9239
Total Green Algae	71.91	0.45	-0.0140	0.4354	<b>-0.0117</b>	<b>0.0000</b>	-0.0133	0.8592	-0.0292	0.6489	0.0139	0.9144
Total Red Algae	61.59	0.66	<b>0.1247</b>	<b>0.0000</b>	<b>-0.0169</b>	<b>0.0000</b>	-0.1661	0.1691	-0.0863	0.4031	0.3267	0.1183
Total Coralline Red Algae	10.24	0.03	<b>0.0236</b>	<b>0.0000</b>	-0.0003	0.1847	-0.0122	0.5560	0.0254	0.1506	-0.0456	0.2025
Total Brown Algae	20.56	0.08	<b>0.0666</b>	<b>0.0000</b>	<b>-0.0011</b>	<b>0.0083</b>	0.0267	0.4585	0.0406	0.1874	-0.0696	0.2646
Total Sponges	71.10	0.28	<b>0.1055</b>	<b>0.0000</b>	<b>-0.0054</b>	<b>0.0000</b>	0.0458	0.3476	-0.0259	0.5343	<b>0.1754</b>	<b>0.0377</b>
Total Stony Corals	37.67	0.09	<b>0.0597</b>	<b>0.0000</b>	<b>-0.0017</b>	<b>0.0000</b>	0.0128	0.6098	0.0000	0.9988	0.0182	0.6745
Total Octocorals	16.31	0.03	<b>0.0223</b>	<b>0.0000</b>	<b>-0.0009</b>	<b>0.0000</b>	<b>0.0429</b>	<b>0.0128</b>	0.0081	0.5823	0.0251	0.4004
Substrate Type							0.2152	0.1146	0.2177	0.0618	0.1474	0.5320
Substrate Depth							-3.7520	0.1939	-4.3060	0.0812	-4.5740	0.3601

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ANCOVA of Distance from Shore and Development for Taxa Groups and Substrates: Key Largo

	Site Percent	Mean Density	Substrate Type		Sediment Depth		Distance From Shore		Development		Interaction	
			Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P
Total Seagrasses	96.22	2.26	<b>-0.2167</b>	<b>0.0024</b>	<b>0.0419</b>	<b>0.0000</b>	-0.3306	0.2646	-0.4338	0.1239	-0.3382	0.5432
Total Calcareous Green Algae	92.63	0.76	<b>0.2101</b>	<b>0.0000</b>	-0.0016	0.3131	0.1028	0.3764	0.2035	0.0659	<b>-0.4769</b>	<b>0.0292</b>
Total Green Algae	77.88	0.57	0.0563	0.1299	<b>-0.0120</b>	<b>0.0000</b>	0.0703	0.5807	0.1211	0.3172	-0.0927	0.6980
Total Red Algae	54.14	0.57	<b>0.3154</b>	<b>0.0000</b>	<b>-0.0131</b>	<b>0.0000</b>	<b>-0.3662</b>	<b>0.0313</b>	0.0868	0.5908	0.0185	0.9537
Total Coralline Red Algae	2.70	0.01	0.0010	0.7630	-0.0001	0.5748	<b>-0.0206</b>	<b>0.0490</b>	-0.0088	0.3771	0.0188	0.3367
Total Brown Algae	20.68	0.06	<b>0.0654</b>	<b>0.0000</b>	<b>-0.0015</b>	<b>0.0137</b>	<b>-0.1032</b>	<b>0.0222</b>	0.0182	0.6707	0.0274	0.7457
Total Sponges	68.53	0.22	<b>0.1050</b>	<b>0.0000</b>	<b>-0.0031</b>	<b>0.0000</b>	0.0622	0.2540	-0.0106	0.8378	0.0529	0.6050
Total Stony Corals	36.69	0.08	<b>0.0580</b>	<b>0.0000</b>	<b>-0.0020</b>	<b>0.0000</b>	-0.0253	0.4277	0.0064	0.8323	0.0374	0.5323
Total Octocorals	19.42	0.02	<b>0.0085</b>	<b>0.0181</b>	<b>-0.0008</b>	<b>0.0000</b>	0.0114	0.3378	-0.0105	0.3526	0.0180	0.4190
Substrate Type							0.0978	0.5911	0.2089	0.2280	-0.3263	0.3401
Substrate Depth							<b>-8.5840</b>	<b>0.0372</b>	<b>-15.2000</b>	<b>0.0001</b>	9.9226	0.1990

**Appendix 1a - Taxa Groups**  
**Florida Keys**

ANCOVA of Distance from Shore and Development for Taxa Groups and Substrates: Marathon

	Site Percent	Mean Density	Substrate Type		Sediment Depth		Distance From Shore		Development		Interaction	
			Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P
Total Seagrasses	88.24	2.28	-0.0425	0.6930	<b>0.0513</b>	<b>0.0000</b>	-1.3210	<b>0.0271</b>	-0.9413	<b>0.0391</b>	1.0270	0.2258
Total Calcareous Green Algae	90.98	1.12	<b>0.1432</b>	<b>0.0136</b>	-0.0114	<b>0.0000</b>	0.3283	0.2278	-0.2164	0.2979	0.1227	0.7512
Total Green Algae	43.92	0.19	0.0057	0.8450	-0.0094	<b>0.0000</b>	-0.2317	0.1069	-0.1497	0.1725	0.2773	0.1752
Total Red Algae	54.90	0.58	-0.0496	0.4490	-0.0263	<b>0.0000</b>	<b>0.8516</b>	<b>0.0116</b>	0.2098	0.4127	-0.5936	0.2143
Total Coralline Red Algae	11.37	0.05	<b>0.0637</b>	<b>0.0030</b>	-0.0011	0.2638	-0.0624	0.5112	0.1335	0.0667	-0.2024	0.1354
Total Brown Algae	10.59	0.03	<b>0.0408</b>	<b>0.0009</b>	-0.0006	0.2690	-0.1159	0.2128	0.1294	0.0669	-0.2340	0.0755
Total Sponges	68.24	0.33	<b>0.1837</b>	<b>0.0000</b>	-0.0070	<b>0.0000</b>	-0.0067	0.9646	-0.0512	0.6551	0.2531	0.2371
Total Stony Corals	34.90	0.08	<b>0.0811</b>	<b>0.0000</b>	-0.0020	<b>0.0061</b>	-0.2059	0.0846	-0.0527	0.5592	0.1267	0.4514
Total Octocorals	15.69	0.05	<b>0.0478</b>	<b>0.0021</b>	-0.0021	<b>0.0035</b>	0.0042	0.9552	0.0429	0.4575	-0.0396	0.7129
Substrate Type							-0.0079	0.9113	0.0019	0.9728	0.0333	0.7429
Substrate Depth							0.6383	0.0528	0.0022	0.9651	-0.0021	0.9822
							-11.7200	0.1003	0.1113	0.6571	0.3377	0.4704
									2.7206	0.6165	-9.2140	0.3633

**Appendix 1a - Taxa Groups**  
**Florida Keys**

ANCOVA of Distance from Shore and Development for Taxa Groups and Substrates: Big Pine

	Site Percent	Mean Density	Substrate Type		Sediment Depth		Distance From Shore		Development		Interaction	
			Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P
Total Seagrasses	89.74	2.06	-0.1043	0.2249	<b>0.0544</b>	<b>0.0000</b>	0.6448	0.1724	0.7533	0.1063	<b>-2.6180</b>	<b>0.0346</b>
Total Calcareous Green Algae	99.04	1.02	0.0763	0.1042	-0.0026	0.2202	<b>0.4904</b>	<b>0.0016</b>	0.0626	0.6805	0.3528	0.3815
Total Green Algae	77.24	0.39	0.0197	0.5769	<b>-0.0071</b>	<b>0.0000</b>	<b>-0.3266</b>	<b>0.0088</b>	0.0218	0.8587	0.0347	0.9147
Total Red Algae	72.76	0.79	<b>0.3069</b>	<b>0.0001</b>	-0.0067	0.0585	-0.3219	0.2578	-0.3484	0.2145	0.7248	0.3299
Total Coralline Red Algae	18.59	0.06	<b>0.0510</b>	<b>0.0006</b>	-0.0003	0.6564	<b>0.1030</b>	<b>0.0329</b>	-0.0558	0.2591	0.0860	0.5115
Total Brown Algae	18.27	0.07	<b>0.1042</b>	<b>0.0000</b>	0.0007	0.4866	0.0787	0.2810	-0.0026	0.9714	0.1261	0.5088
Total Sponges	73.40	0.28	<b>0.0867</b>	<b>0.0020</b>	<b>-0.0062</b>	<b>0.0000</b>	-0.0332	0.7606	-0.1706	0.1129	0.4648	0.1034
Total Stony Corals	29.49	0.06	<b>0.0886</b>	<b>0.0000</b>	0.0004	0.5081	0.0406	0.4180	-0.0370	0.4537	0.0005	0.9970
Total Octocorals	7.05	0.01	<b>0.0199</b>	<b>0.0058</b>	-0.0002	0.5890	<b>0.0613</b>	<b>0.0105</b>	<b>-0.0637</b>	<b>0.0071</b>	<b>0.3006</b>	<b>0.0000</b>
Substrate Type							-0.4564	0.1227	-0.1861	0.5227	0.7851	0.3096
Substrate Depth							<b>18.1190</b>	<b>0.0065</b>	2.8891	0.6580	-10.7400	0.5350

**Appendix 1a - Taxa Groups**  
**Florida Keys**

ANCOVA of Distance from Shore and Development for Taxa Groups and Substrates: Key West

	Site Percent	Mean Density	Substrate Type		Sediment Depth		Distance From Shore		Development		Interaction	
			Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P	Coefficient	P
Total Seagrasses	83.97	1.83	<b>-0.1971</b>	<b>0.0090</b>	<b>0.0523</b>	<b>0.0000</b>	<b>-2.1850</b>	<b>0.0002</b>	-0.3935	0.3324	0.4851	0.5722
Total Calcareous Green Algae	97.05	1.27	<b>-0.1072</b>	<b>0.0307</b>	-0.0022	0.4077	0.2563	0.3117	-0.0459	0.7940	0.2452	0.5102
Total Green Algae	80.17	0.49	-0.0545	0.0696	<b>-0.0155</b>	<b>0.0000</b>	<b>0.3803</b>	<b>0.0411</b>	-0.0936	0.4674	-0.0979	0.7193
Total Red Algae	72.15	0.67	-0.0166	0.7334	<b>-0.0170</b>	<b>0.0000</b>	0.1777	0.5215	0.0295	0.8783	0.5567	0.1726
Total Coralline Red Algae	15.61	0.03	0.0119	0.1287	-0.0006	0.1412	0.0424	0.2963	0.0355	0.2083	-0.0576	0.3349
Total Brown Algae	33.76	0.13	<b>0.0669</b>	<b>0.0212</b>	-0.0013	0.4061	<b>0.6567</b>	<b>0.0000</b>	<b>0.2404</b>	<b>0.0221</b>	<b>-0.6732</b>	<b>0.0026</b>
Total Sponges	76.79	0.36	0.0290	0.2641	<b>-0.0108</b>	<b>0.0000</b>	<b>0.3461</b>	<b>0.0298</b>	0.1048	0.3414	-0.1035	0.6568
Total Stony Corals	53.59	0.12	<b>0.0385</b>	<b>0.0095</b>	<b>-0.0030</b>	<b>0.0002</b>	0.1575	0.0557	-0.0175	0.7588	-0.0747	0.5357
Total Octocorals	21.52	0.06	0.0151	0.2336	<b>-0.0019</b>	<b>0.0057</b>	<b>0.1947</b>	<b>0.0040</b>	0.0621	0.1833	-0.1104	0.2635
Substrate Type							<b>1.3480</b>	<b>0.0013</b>	<b>0.8482</b>	<b>0.0034</b>	-1.1880	0.0515
Substrate Depth							<b>-25.7300</b>	<b>0.0008</b>	-9.4440	0.0728	10.3320	0.3525